

Application Serial No: 10/013,084
Attorney Docket No.: 51959 (ACT-173)

REMARKS

Entry of the foregoing, reexamination and reconsideration of the subject matter identified in caption, as amended, pursuant to and consistent with 37 C.F.R. §1.112, and in light of the remarks which follow are respectfully requested.

Claims 1-8 and 10-29 are pending in the application, claim 9 having been canceled and claim 29 having been newly presented above. By the foregoing amendments, claims 1, 19 and 22 have been amended to further define the invention. Claim 1, for example, has been amended to point out that the optical device package has an optical semiconductor component, that the frame defines an opening from the top surface to the bottom surface, and that the optical semiconductor component is disposed in the opening. Support can be found at least in Figure 1A. Claims 19 and 22 have been amended in a similar manner with respect to the opening defined by the frame and the optical semiconductor component being disposed in the opening. New claim 30 points out that the frame has a "U-shaped configuration", support for which can be found at least in Figure 7.

Applicant thanks the Examiner for his time and consideration during the telephonic interview of September 2, 2004. The content of the Examiner Interview Summary accurately reflects the substance of the interview.

Turning now to the Official Action, the objection to claim 25 has been addressed by the Amendment filed August 27, 2004.

Claims 1-5, 7-16 and 19-28 stand rejected under 35 U.S.C. §102(e) over Jayaraj et al (U.S. Patent No. 6,320,257), and claims 6, 16 and 17 stand rejected under 35 U.S.C. §103(a) over Jayaraj et al. The claims as now presented cannot properly be rejected based on the teachings of Jayaraj et al.

Jayaraj et al does not disclose or suggest each feature of the present invention. For example, Jayaraj et al does not disclose or fairly suggest an optical device package as set forth in claim 1, which includes a frame mounted to the upper surface of a substrate, the frame having conductive pathways extending between a top surface of the frame and a bottom surface of the frame, and defining an opening from the top surface to the bottom surface, wherein an optical semiconductor component is disposed in the opening.

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Similarly, Jayaraj et al does not disclose or suggest each of the features relating to the frame recited in independent claim 19 or 22.

Jayaraj et al relates to chip packaging techniques, and in particular, to multichip modules and techniques for the fabrication thereof. In the rejections, the Office relies on Figures 8B and 8C of Jayaraj et al. The Office points to LCP (liquid crystal polymer) substrate 122 in support of the claimed "frame". LCP substrate 122, however, is not suggestive of the presently claimed frame, which defines an opening from a top surface to a bottom surface thereof, and in which opening is disposed an optical semiconductor component. Neither chip 12 nor laser 110 are disposed in an opening extending from the top surface to the bottom surface of the LCP substrate 122. Jayaraj et al does disclose "picture frame 20" in connection with Figure 8B and C (col. 8, lines 48-49). Picture frame 20 does not, however, include, *inter alia*, conductive pathways, solder pads, or solder balls. For at least the foregoing reasons, independent claims 1, 19 and 22, and their respective dependent claims are allowable over the applied Jayaraj et al document.

Moreover, various dependent claims still further distinguish over that document. For example, Jayaraj et al does not disclose or fairly suggest that conductive pathways comprise at least one conductive via which extends through the frame, as set forth in claim 2. Figure 2B of Jayaraj et al illustrates the electrical layout of an LCP substrate, and no conductive via appears to extend through the frame. Nor does that document appear to disclose or suggest at least one conductive path which extends along a side surface of the frame, as set forth in claim 3. Claim 11 sets forth that the frame comprises an interior ledge. It is not at all apparent what portion of Jayaraj et al is relied on for such feature. Claims 12 ,13 and 20 relate to a lid mounted to the frame or frame ledge. In rejecting these claims, the Official Action relies on Figure 8B. This is an entirely different embodiment from Figure 8C, which is relied on in rejecting claim 1. There is no disclosure or suggestion in Jayaraj et al to use a lid in Figure 8C in addition to the LCP substrate, since the Jayaraj device is already hermetically sealed. Claims 16 and 17 (and new claim 29) recite that the frame comprises a band-like shape circumscribing an open area and a U-shaped configuration, respectively. The LCP substrate of Jayaraj et al is in no way suggestive of these claimed structures. Claim 18 depends from claim 1, and recites that the frame is fabricated from a sintered ceramic material. The Jayaraj et al

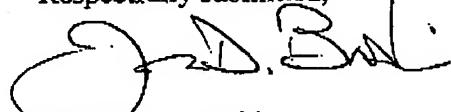
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substrate is formed of "a low moisture permeability thermoplastic material", preferably an LCP material (col. 4, lines 29-31). Use of a thermoplastic material appears to be an important aspect of the Jayaraj et al invention, such that use of a sintered ceramic material would not have been an obvious modification. It should be clear that other dependent claims, while not mentioned specifically, also further distinguish over the applied document.

From the foregoing, further and favorable action in the form of a Notice of Allowance is believed to be next in order, and such action is earnestly solicited.

If there are any questions concerning this paper or the application in general, the Examiner is invited to telephone the undersigned at his earliest convenience.

Respectfully submitted,



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